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(54) **LASER BEAM MACHINING HEAD DEVICE**

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(57) Abstract:

PURPOSE: To prevent the thermal strain of a transparent body and to extend its service life and to remove the evil of the deviation of a focus of laser beam by providing a gas blowing means for cooling at the laser beam emitting side of a laser beam machining head device.

CONSTITUTION: The gas for cooling blown on space in the laser beam 2 emitting side of a holder 4 from a nozzle 12 through a duct 13. The gas pressure rises in the space and the gas for cooling is blown from holder openings 4 on the center of the transparent body 8 in opposition. The transparent body 8 is cooled on the central part and on the other hand, its periphery is cooled by cooling water flowing in a waterway 10 and the temperature distribution of the transparent body 8 is averaged and the thermal strain in its inside can be prevented. As a result, the service life of the transparent body 8 is prolonged and besides, the evil of the deviation of the focus of the laser beam 2, etc., can be removed.

